

6. Locate red and orange striped wire on the J4 Connector Pin # 7 (Speed Signal Ground). Cut the red and orange striped wire about 6" down from the J4 Connector. (The wire going into the Power Module will not be used again.) Connect red and orange striped wire from digital speed sensor box to red and orange striped wire going to the APU main unit with butt connector (Figure 7)

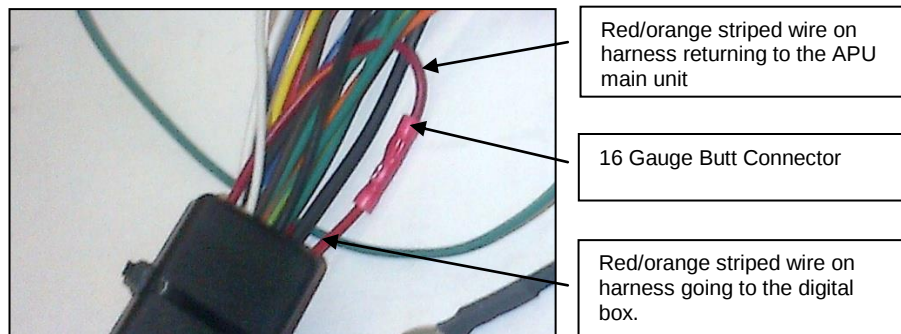


Figure 7

Note

Do NOT connect the red/orange striped wire to the J4 Pin # 7 Power Module. If connected, the unit will not work properly.

7. Since it is no longer being used, cover the red/orange striped wire going to the power module with electrical tape and tie it to the harness.
8. Neatly tie wrap the digital sensor module to the harness. (Figure 8)

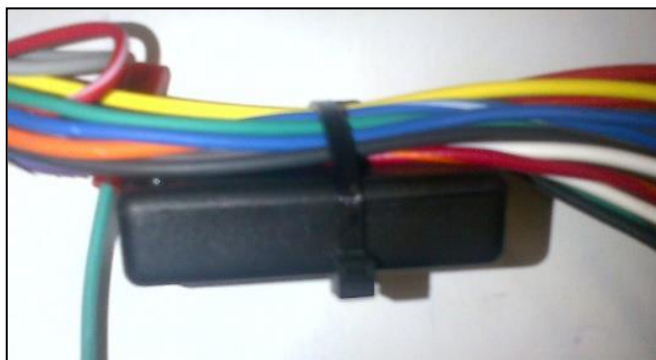


Figure 8

9. Before reconnecting the power module cables, reconnect the battery cable to the APU main unit.
10. Reconnect the power module cables J1 and J4 and ensure that the ground from the speed sensor is connected at the power module ground location.
11. Start RigMaster unit to test.

Please call RigMaster Technical Support at 1-800-249-6222 if unit does not start. Thank you.

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Technical Service Bulletin

RMI-TSB-004-20150525

Speed Sensor Upgrade Kit for RIGMASTER APU's (RP7-103 with Perkins/Cat Engines)

The electro-mechanical speed sensor (RP7-103) has been discontinued and is being upgraded to a digital version at our manufacturing facilities for ALL RigMaster APU's. The new digital speed sensor will be packaged as a kit and can replace the older version speed sensor (RP7-103) if the sensor fails. The kit will include the following items:

NOTE

The items below are sold as a Kit if replacing old sensor. **Kit Part #LG7-105K.** Models T4-6 and V10 APUs will not require the use of Part B (Alternator to Battery wire).

Ref #	Qty.	Part #	Colour	For RigMaster Model	Description
A	1	RP7-WL16-R/O	Red/Orange Stripe	LG200, T4-6, V10, 14-6	Alternator wire to Harness
B	1	RP7-WL14-Red	Red	LG200	Alternator to Battery (for 170 Amp models only)
C	1	LG7-105	Black	LG200, T4-6, V10, 14-6	Digital Speed Sensor
D	3	RP15-141	Yellow	LG200, T4-6, V10, 14-6	10 Gauge Wire Connectors
E	1	RP15-142	Blue	LG200, T4-6, V10, 14-6	16 Gauge Wire Connectors
F	1	RP18-LM-1/4	Black	LG200, T4-6, V10, 14-6	Alternator Wire Loom (not shown below) 20 3/4" LOOM; for use on RP7-WL16-R/O

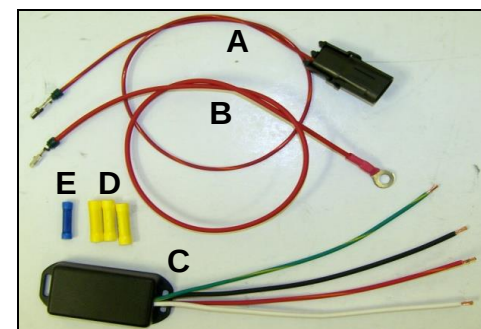


Figure 1

Installation Procedure

Engine Compartment

1. Disconnect the J1 harness from power module to avoid a power surge when reconnecting the battery.
2. Disconnect the positive RigMaster APU battery cable from the trucks battery bank.
3. Loosen battery cable on the starter to allow for working space.
4. Remove alternator connector from alternator. (Figure 3)
5. Remove 2 small black plugs in alternator connector. (Figure 2)
6. Install speed sensor wire (red with orange stripe) on right side of alternator connector and battery wire (red) on left side of the connector. (Figure 4)

Connector Plugs

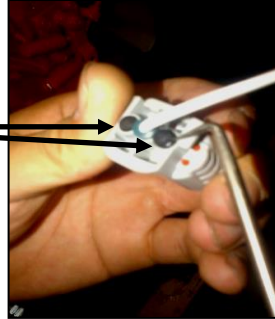


Figure 2

NOTE

The items below are sold as a Kit if replacing old sensor. **Kit Part #LG7-105K.** Models T4-6 and V10 APUs will not require the use of Part B (Alternator to Battery wire). Alternator terminal pins can only be installed one way, with the flat part of the terminal pin on the top side of the connector.

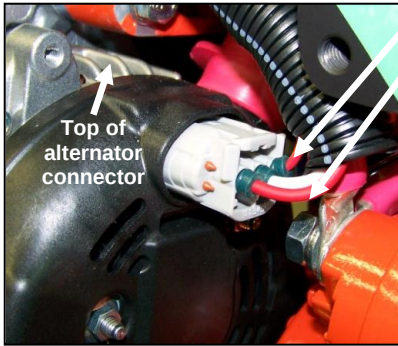


Figure 3

Speed Sensor Wire (red/orange stripe) – Right Side

Battery Wire (red) – Left Side
[This terminal is not needed for T4-6 and V10 models]

7. Reinstall connector to alternator.
8. Tighten starter nut, being careful not to over tighten as the starter stud is copper.
9. For LG200 Models: Route red battery wire in loom with starter cable to positive battery post on the back plate and secure on the positive battery post. (For T4-6 Models, skip to step 10.)

10. Route speed sensor wire (red with orange stripe) in supplied loom around engine to where the original speed sensor was connector and connect to harness. (Figure 4)

Loom routed from Alternator

New connector from Alternator



Figure 4

CAUTION

Ensure all wires are routed away from manifold exhaust and use tie wraps to secure the loom.

At this point all wiring in the engine cabinet is complete.

Installing the Digital Speed Sensor

1. Take the speed sensor and butt connectors to the HVAC location in the bunk.
2. The power module J1 Connector should already be disconnected from a previous step.
3. Locate the white wire on J1 Connector Pin # 1 (Engine Run Solenoid). Cut white wire about 6" down from the connector and connect white wire from digital speed sensor box to white wire going to the APU main unit with butt connection. (2 white wires connected together on one end). Connect the other end to the single white wire going to the power module J1 Connector. (Figure 5)
4. Locate the black wire on J1 Connector Pin # 4 (Ground). Cut the black wire about 6" down from the connector and connect black wire from digital speed sensor box to black wire going to the J1 Connector. (2 black wires connected together on one end). Connect the other end to the single black wire going to the APU main unit. (Figure 5)

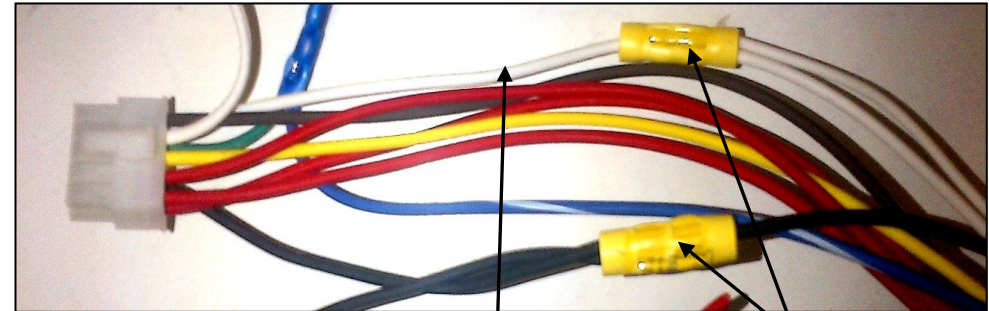


Figure 5

Black (ground) wire going to Power Module

White (Run Solenoid) wire going to Power Module

10 Gauge Butt Connectors

Note

Notice the 2 wire connection on the butt connector is reversed on the black wire. This will allow the direction of the ground wire to point towards the power module ground location.

5. Locate the green and yellow striped wire on the J4 Connector Pin # 3 (speed signal). Cut the green and yellow striped wire about 6" down from the connector and connect green and yellow striped wire from digital speed sensor box to green and yellow striped wire going to the APU main unit with butt connector. (2 green and yellow striped wires connected together on one end). Connect the other end to the single green and yellow striped wire going to the power module J4 Connector Pin # 3 (speed signal). (Figure 6)

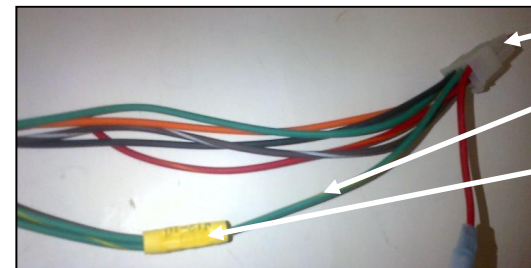


Figure 6

J4 Connector

Green/Yellow Striped Wire (speed sensor input) to Power Module

10 Gauge Butt Connector

Note

Be careful as there is also a **solid green** wire on the J4 Connector.